

PATENT COOPERATION TREATY

PCT

INTERNATIONAL-TYPE SEARCH REPORT

(PCT Article 15.5)

National application No. 0202287-9	Country or Office of filing SE	Applicant's or agent's file reference BV-1031 SE
Filing date (day/month/year) 19 July 2002		(Earliest) Priority Date (day/month/year)
Applicant BIOVITRUM AB		

Date of request for international-type search 19 July 2002	International-type search request No. SE 02/00756
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This international-type search report has been prepared by this International Searching Authority and is transmitted to the applicant.

This international-type search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☒ Certain claims were found unsearchable (See Box I).
2. ☐ Unity of invention is lacking (See Box II).
3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international-type search was carried out on the basis of the sequence listing

☐ filed with the international application.
☐ furnished by the applicant separately from the international application,

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ transcribed by this Authority.

INTERNATIONAL-TYPE SEARCH REPORT

Search request No.
SE02/00756

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international-type search report has not been established in respect of certain claims for the following reasons:

1. ☒ Claims No.: 15, 16
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 15, 16 relate to methods of treatment of the human or animal body by surgery or by therapy/diagnostic methods practised on the human or animal body/Rule 39.1.(iv). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds/compositions.
2. ☐ Claims No.:
because they relate to parts of the national application that do not comply with the prescribed requirements to such an extent that no meaningful international-type search can be carried out, specifically:

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international-type search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international-type search report covers only those claims for which fees were paid, specifically claims No.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international-type search report is restricted to the invention first mentioned in the claims, it is covered by claims No.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL-TYPE SEARCH REPORT

Search request No.

SE 02/00756

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07D 403/02, C07D 295/033, A61K 31/496, A61P 3/04, A61P 3/10, A61P 9/00, A61P 15/00, A61P 25/28, A61P 25/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C07D, A61K, A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, CHEM.ABS.DATA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	J. Med. Chem. Volume 24, 1981, William C. Lumma et al, "Piperazinylquinoxalines with Central Serotoninmimetic Activity", pages 93-101 --	1-24
A	Journal of Medicinal Chemistry, Volume 21, No. 6, William C. Lumma et al, "Piperazinylpyrazines with Central Serotoninmimetic Activity", pages 536-542 --	1-24
A	GB 1440722 A (MERCK & CO INC), 23 June 1976 (23.06.76) --	1-24
A	GB 1492528 A (MERCK & CO INC.), 23 November 1977 (23.11.77) --	1-24

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international-type search

4 March 2003

Date of mailing of the international-type search report

Name and mailing address of the ISA/
Swedish Patent Office
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INTERNATIONAL-TYPE SEARCH REPORT

Search request No.

SE 02/00756

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4163849 A (LUMMA, JR. ET AL), 7 August 1979 (07.08.79) --	1-24
A	WO 9533721 A1 (H. LUNDBECK A/S), 14 December 1995 (14.12.95) -- -----	1-24

INTERNATIONAL-TYPE SEARCH REPORT

Information on patent family members

Search request No.

30/12/02

SE 02/00756

GB	1440722	A	23/06/76	AU	7073174	A	08/01/76
				BE	817608	A	13/01/75
				BG	21606	A	20/07/76
				CH	605919	A	13/10/78
				DD	112127	A	20/03/75
				DE	2433397	A	06/02/75
				DK	342674	A	03/03/75
				ES	428107	A	16/11/76
				FI	193974	A	14/01/75
				FR	2236499	A,B	07/02/75
				IE	39869	B,L	17/01/79
				IL	45158	D	00/00/00
				JP	50037791	A	08/04/75
				LU	70510	A	27/03/75
				NL	7408705	A	15/01/75
				NO	742351	A	10/02/75
				RO	63539	A	15/07/78
				SE	417316	B,C	09/03/81
				SE	7408486	A	14/01/75
				ZA	7404466	A	25/02/76

INTERNATIONAL-TYPE SEARCH REPORT

Information on patent family members

30/12/02

Search request No.

SE 02/00756

GB	1492528	A	23/11/77	AR	210349	A	29/07/77
				AT	288376	A	15/05/79
				AT	353795	B	10/12/79
				AU	496854	B	02/11/78
				BE	840904	A	16/08/76
				BG	34185	A	15/07/83
				CA	1059128	A	24/07/79
				CH	619462	A	30/09/80
				CS	195726	B	29/02/80
				CY	1090	A	27/12/80
				DD	124599	A	02/03/77
				DE	2617205	A,B,C	28/10/76
				DK	143899	B,C	26/10/81
				DK	164476	A	22/10/76
				EG	12387	A	31/12/78
				ES	447150	A	16/09/77
				ES	459405	A	16/08/78
				ES	459406	A	16/08/78
				ES	459407	A	16/08/78
				FI	62666	B,C	29/10/82
				FI	760978	A	22/10/76
				FR	2308367	A,B	19/11/76
				GR	59900	A	16/03/78
				HK	60380	A	07/11/80
				HU	172684	B	28/11/78
				IE	42979	B,L	19/11/80
				IL	49391	A	30/09/79
				JP	1030870	C	29/01/81
				JP	51136688	A	26/11/76
				JP	55022475	B	17/06/80
				KE	3088	A	07/11/80
				LU	74795	A	07/02/77
				MY	22581	A	31/12/81
				NL	167692	B,C	17/08/81
				NL	7603800	A	25/10/76
				NO	146599	B,C	26/07/82
				NO	761207	A	22/10/76
				PH	12274	A	12/12/78
				PL	99664	B	31/07/78
				PT	65027	A,B	01/05/76
				RO	73278	A	09/09/82
				SE	421695	B,C	25/01/82
				SE	7604093	A	22/10/76
				SU	638260	A	15/12/78
				US	4081542	A	28/03/78
				YU	100676	A	31/08/82
				ZA	7602320	A	30/11/77

US	4163849	A	07/08/79	NONE
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INTERNATIONAL-TYPE SEARCH REPORT

Information on patent family members

Search request No.

30/12/02

SE 02/00756

WO	9533721	A1	14/12/95	AT	196760	T	15/10/00
				AU	685284	B	15/01/98
				AU	2669895	A	04/01/96
				BR	9507929	A	09/09/97
				CA	2192112	A	14/12/95
				CZ	287629	B	17/01/01
				CZ	9603590	A	14/05/97
				DE	69519022	D,T	10/05/01
				DK	765311	T	29/01/01
				EP	0765311	A,B	02/04/97
				SE	0765311	T3	
				ES	2151601	T	01/01/01
				FI	964898	A	05/12/96
				GR	3035032	T	30/03/01
				HU	76464	A	29/09/97
				HU	9603371	D	00/00/00
				IL	114026	A	20/06/99
				JP	10501524	T	10/02/98
				NO	307880	B	13/06/00
				NO	965195	A	30/01/97
				NZ	287852	A	28/07/98
				PL	183096	B	31/05/02
				PL	317531	A	14/04/97
				PT	765311	T	30/03/01
				RU	2142458	C	10/12/99
				SI	765311	T	00/00/00
				SK	155096	A	06/08/97
				SK	280824	B	14/08/00
				US	6218394	B	17/04/01
				ZA	9504689	A	29/01/96
